5.0 DISCUSSION OF RESULTS

The primary purpose of this exercise is to identify a preferred highway corridor for enhanced cross-border access between the West and Central Kootenay Region of British Columbia and the Tri-County Region of Northeast Washington State. The results of this technical evaluation generally support the conclusion that the existing Hwy 22A route from Trail, BC to the US Border, the Northport-Boundary Road from the Canadian Border to Northport, WA, and State Route 25 from Northport, WA to US 395 offers the most logical route choice. While this conclusion is derived from a number of key technical considerations, it is fundamentally based on attempting to balance the public benefits associated with this investment with the public costs associated with its implementation. The selected corridor(s) offers reduced travel times, vehicle operating costs and enhanced safety performance, and most closely approximates the benefits with the costs. This approach to route selection and justification is standard practice for both the BC Ministry of Transportation and the Washington State Department of Transportation.

The results are, however, also indicative of challenging project justification circumstances (again from a technical perspective), as the measured public benefits do not approach the anticipated cost of implementation. These conclusions are consistent with expectation, given the divergent situation in this area related to the difficult (and thus costly) topographical conditions being traversed and the relatively low traffic volumes under consideration. Proposed improvements are expected to generate a benefit to cost ratio in the range of 0.4 CAN (0.3 US) with an associated net present value in the range of -$21.5 M CAN (-$21.1 M US). Analysis results of this nature do not typically support project advancement.

Sensitivity analysis considering higher base vehicle operating costs to account for unique local conditions (particularly the Warfield Hill west of Trail), higher than the conservative forecast traffic growth rates (to account for unexpected Regional growth or economic development initiatives), a lower discount rate of public funds (to account for changes to the Regional economy over the planning horizon) and variations on the cost estimate (to account for uncertainties in the high level strategic planning estimates derived herein) all confirm this same conclusion. Alternate funding and delivery mechanisms could be considered to enhance the attractiveness of such an investment if implementation is to be considered in the shorter term.

5.1 Opportunities and Constraints

A number of noteworthy opportunities and constraints related to a potential project of this nature have emerged throughout the study process and are noted here for consideration and future tracking.

- **Waneta Bridge** – The Waneta Bridge, immediately north of the US-Canada Border on Hwy 22A, was built in 1893 and consists of a single lane, wooden deck 3-span through truss bridge. The BC Ministry of Transportation indicates that this facility is currently nearing the end of its service life, and plans to replace this structure (presumably to a two lane standard) within the next decade are being developed. This short term investment represents a key milestone in the decision-making process as it relates to this potential project, as an investment of this nature is likely to confirm the future approach. An 'on-line' investment in the structure in the general vicinity of the current facility on Hwy 22A will further contribute to the elimination of any further consideration of alignment options on the west side of the Columbia River. Note that the 'on-line' investment is consistent with the results of this exercise.

- **Patterson/Frontier Border Crossing Facility Improvements** – The US Department of Homeland Security routinely upgrades border crossing facilities to ensure consistency with current standards for security, processing and screening. A significant upgrade (~$10 M USD) is scheduled for the Frontier/Patterson crossing facility on Hwy 22 and SR 25 within the next few years, as this is the primary commercial crossing port in the area at this time. Such an investment could contribute to confirming the future approach to advancing with such a project in this area, as it is unlikely that a redundant investment could be justified at the Waneta/Boundary border crossing location in the short term afterwards. Decisions relating to the future direction for such corridor improvements should be considered and advanced to avoid such circumstances.

- **Construction Phasing** – While the costs and magnitude of the investment required to entertain such a project may appear to be overwhelming in the overall context, it is important to note that its delivery could be phased incrementally to minimize the impacts to agency cash flows. In this regard, the key short term component of the project, otherwise described as the 'missing link', is the improvement to the Boundary-Northport Road (including a new bridge at Deep Creek), border crossing improvements at the Waneta/Boundary

facility (no estimate of cost provided), and the Waneta Bridge. In isolation, this series of improvements could achieve a significant component of the project goals and objectives in the short term. A breakdown of the estimated value of this investment is provided in **Table 38** for consideration.

Table 38 – Short Term Phasing Option Summary

Item	Cost Estimate
Waneta Bridge	$ 4.0 M CAN
Boundary-Northport Road	$ 16.9 M USD
Deep Creek Bridge	$ 11.8 M USD
Waneta/Boundary Border Facility	$ 10 M USD (assumed based upon planned Frontier/Patterson upgrade)
Total	$ 4.0 M CAD (MoT) $ 38.7 M USD (WSDOT)

- **US Department of Homeland Security** – The creation of the Department of Homeland Security (DHS) in the US has generated several adjustments to border processing procedures and the roles of border personnel. In December 2003, the DHS announced rules for mandatory electronic pre-notification of all manifest data for cargo shipments entering the US. For trucks, the transmittal timelines are as follows: 30 minutes for FAST (see below for a description of FAST) shipments and 60 minutes prior to arrival at US border for non-FAST shipments. For rail, the transmittal timeframe is 2 hours prior to arrival in the US. It is anticipated that the costs associated with purchasing systems to enable electronic data interchange will be offset by faster border clearance. Once a port is ready to implement the rules, and official notice given, carriers will have a 90 day period to comply. It is not known at this time when the Patterson/Frontier or Boundary/Waneta site will be given official notice; however, it will have an impact upon the processing performance for southbound commercial trucks depending upon the extent to which the new rules are accommodated. This remains an uncertainty at this point.

The Free and Secure Trade (FAST) program is designed to harmonize commercial clearance processes at the Canada/U.S. Border. The intent is to ensure border security while providing quick processing for FAST participants. The program is being touted to importers, carriers and drivers as a method to reduce processing costs, to reduce delays, and in general as an easier way to move commercial shipments across the

border. In order to qualify for FAST, the importer and carrier must both be approved by Canada's Partner's in Protection (PIP) program through Canada Customs Revenue Agency (CCRA) and/or the U.S. Customs-Trade Partnership Against Terrorism (C-TPAT) program through United States Bureau of Customs and Border Protection (CBP). The commercial driver must also be approved and carry a FAST-Commercial Driver Card. The FAST program is currently implemented at twelve major border crossings. The intent of the Canadian Federal Government is to have all major commercial crossings enrolled in the FAST program by the end of 2004, however it is not known whether any such improvements are being planned for either the Waneta/Boundary facility or the Patterson/Frontier facility, as neither are considered major commercial crossing locations.